

Sphærocoris, 1835, t. *ocellatus*; *Stiretrosoma*, 1837, t. *erythrocephala*; *Platycoris*, Guér., 1830, t. *rubromarginatus*; *Rhaphigaster*, 1832, t. *punctipennis*; *Alphocoris* t. *lixoides*; *Hemiptycha*, 1833, t. *punctata*; *Solenostethium* [recte *-sthedium*] t. *lynceum*; ⁴³*Phimodera*, 1839, t. *galgulina*; *Apodiphya* [recte *Apodiphus*, 1837], t. *hellenicus* (= *amygdali*); *Verlusia*, 1837, t. *rhombea* (= *quadratus*); *Paryphes*, 1835, t. *lætus*. (δ) *Maotys*, unnecessary n. n. for *Ptilocerus*, 1840; *Corcomelas* for *Corimelena*, 1839; *Prooxys*, 1837; *Platycerus*, 1832; *Hymenophora*, 1832; *Metapodus*, 1842; *Placoscelis*, 1837; *Plociomerus* for *Ptochiomera*, 1832; *Lohita* for *Macroceræa*, 1837; *Helicoptera* for *Elidiptera*, 1839; *Doryderes* for *Dyroderes*, 1837; *Phyllochirus*, 1837; *Cladypha* for *Cladodiptera*, 1839; *Hyggops* for *Ugyogs*, 1830; *Physorhynchus*, n. n. for *Loricerus*, Hahn [which is NOT preocc.]; *Metastemma* for *Prostemma*, 1832; *Schizops*, 1837; *Hypsochenia*, 1833; *Achillus*, 1818; *Deropteryx*, 1839; *Acanthischium* [p. 648] for *Acantischium* [p. 367]; *Tlasia*, 1836; *Coryssorhaphis* for *Coryzorhaphis*, 1837.

DESCRIPTIONS OF TEN NEW SPECIES AND NINE
NEW GENERA OF ICHNEUMONIDÆ FROM INDIA,
CEYLON, AND JAPAN.

BY P. CAMERON.

CRYPTINA.

STERIPHOCRYPTUS, gen. nov.

Median segment with two transverse keels, toothed; its spiracles linear; the segment about one-half the length of the mesothorax. Disco-cubital nervure without the stump of a nervure. Transverse median nervure in hind wings broken below the middle. Post-petiole distinctly dilated. Radial cellule large, elongate, the areolet moderate in size, the sides convergent above. Head rounded inwardly in front and behind. Apex of clypeus transverse. Mandibles with two large teeth. Wings large, hyaline. The body is luteous, marked with black; the spiracles of the second abdominal segment are placed shortly behind the middle; the gastroceci are small, deep, round; the malar space large, the head obliquely narrowed behind the eyes and well-developed there. Tarsi long, spinose; the fourth joint roundly incised. Antennæ stout, dilated towards the apex; the basal joints of the flagellum not much longer than the others. There is a distinct metapleural keel.

The type of this genus is larger and more robust than usual with the Cryptina. In Ashmead's arrangement it comes near *Callicryptus*, Bull. U.S. Nat. Mus. xxiii. 43.

⁴³ Homot. *Cæloglossa*, 1839.

STERIPHOCRYPTUS LUTEUS, sp. nov.

Luteous; the sides of the mesonotum, the base and apex of the metanotum, the base of the meso- and metapleuræ and of the abdominal segments, black. Wings hyaline, with a yellowish-fuscous tinge; the nervures blackish; the stigma dark testaceous. Antennæ pale yellow, blackish towards the apex. ♀. Length 15 mm.

Hab. Darjeeling.

Face and clypeus closely punctured, as is also the front; the latter is furrowed in the centre; the centre of the vertex of the front and occiput are rufous in colour. Mandibular teeth black. Mesonotum closely punctured; the furrows are distinct, deep on its basal half. Median segment closely and somewhat strongly punctured; its basal transverse keel is interrupted in the centre. There is an oblique keel above the centre of the propleuræ. The tooth on the metanotum is broad. The transverse cubital nervures converge above; the second is widely bullated, it being only indicated at the top and bottom. Abdomen smooth and shining.

PHYGADEUONINI.

LINYCUS, gen. nov.

Metathoracic spiracles small, oval, distinctly longer than broad; its areola longer than broad, widely separated from the base of the segment. Clypeus distinctly separated from the face, its apex broadly rounded. Malar space large. Mandibles stoutly bidentate. Temples broad. Scape distinctly smaller than the first joint of the flagellum. Scutellum flat, keeled laterally at the base. Mesosternum bordered on its basal half by a deep furrow. Areolet 5-angled; the transverse basal interstitial; the transverse median nervure in hind wings broken far below the middle; the stigma is longish; the radius originates from its middle, the transverse median nervure is interstitial. Abdomen long and slender, flat above, the post-petiole distinctly bent; the last two segments with large pale membranous depression; the last segment bluntly pointed; the ovipositor projects; its sheaths are broad. The spiracles on the first segments are placed close to the apex; there are distinct depressions (gastrocelli) on the base of the second segment; the post-petiole is not keeled. The legs are moderately stout; the basal joints of the flagellum are greatly elongated; the parapsidal furrows are indistinct; the posterior median area is not separated; there are no teeth on the median segment; the abdomen is longer than usual, being longer than the head and thorax united; its second segment is as long as the petiole, and is twice longer than wide; the disco-cubital nervure is angled near the middle, but not broken.

Belongs to the Phygadeuonini, and comes, in Ashmead's table, close to Panargyrops.

LINYCUS RUFIPES, sp. nov.

Black; the median segment and the middle of the post-petiole red; the face except in the centre, clypeus, the mandibles except at the apex, the inner orbits from opposite the base of the antennæ, a

broader band round the top of the eyes, the lower two-thirds of the lower outer orbits, the upper and lower edge of the propleuræ, the tubercles, the lower half of the mesopleuræ, the tegulæ, an irregular mark on the centre of the mesonotum, the scutellum and post-scutellum, pale yellow. There is a curved pale yellow mark on the base of the second segment, there is a narrow yellow line on its apex, a narrower one on the base of the third, and a semicircular mark—the base rounded, the apex transverse—on the fifth and sixth segments, pale yellow. Legs rufous, the four front coxæ and trochanters pale yellow; hinder coxæ black, with a yellow line in the centre above; the hinder trochanters, apex of tibiæ and tarsi blackish. Wings hyaline; the nervures blackish; the stigma testaceous. ♀. Length 6 mm.

Hab. Trincomali, Ceylon (Col. Yerbury).

Face closely, the clypeus sparsely in the centre punctured; the front and vertex more strongly punctured, with a small smooth curved spot on the top of the front. Thorax closely punctured; the scutellum and post-scutellum smooth; the base of the median segment and the areola smooth; the apical slope of the segment closely transversely striated, the centre with the striæ more distinct and more clearly separated than they are on the sides. The large central part of the post-petiole is raised and clearly separated from the more depressed sides; its apex is obscure yellow; the second and third segments are shagreened; the others smooth and shining.

JOPPINI.

LORTYGINA, gen. nov.

Antennæ thickened and dilated at the apex. Scutellum not much raised above the mesonotum, its sides distinctly keeled to near the apex. Base of median segment widely depressed; the areola large, obliquely narrowed towards the base, which is closed, and is widely separated from the base of the segment, to which it is not united by a petiolar area; the segment is completely areolated and bluntly spined on the sides. Areolet 5-angled, wide above; the disco-cubital nervure with a stump; the transverse median nervure is received very shortly behind the transverse basal. Malar space large, as long as the scape of the antennæ. Apex of clypeus transverse; the clypeus projecting. Petiole long and slender; its apical third becoming gradually wider to the apex, the post-petiole not being clearly separated, and smooth and shining. Gastrocœli indistinct, bordered on the outer side by a deep, clearly defined furrow; the segments smooth. The male has the antennæ serrate; the ventral fold is on the second and third segments. The body is rufous in colour, with hyaline wings; the tarsi are much longer than the tibiæ; both are sparsely and weakly spined; the apices of the tarsal joints more thickly than the rest of them. Metathoracic spiracles linear. The abdomen in the male has seven segments; the last large, bluntly pointed, as long as the preceding. There is a stout oblique keel behind the middle of the propleuræ.

This genus appears to be intermediate between the Joppini and the Amblypygi. From its more completely areolated meta-thorax, it may be referred to the latter. The apex of the abdomen

in my female specimen is broken off; but in the male it is twice the length of the thorax. The body is for the greater part rufous, with the apex of the abdomen black; the wings are unspotted. The characteristic features are the keeled scutellum, the areola longer than wide and broadly rounded behind, the long slender abdominal petiole, and the long, deep, narrow gastrocœli.

LORTYGIA RUFA, sp. nov.

Rufous; the four apical segments of the abdomen, an oblique line below the middle of the propleuræ, a similar line below the fore wings, one on the lower half of the apex of the mesopleuræ, the depressions round the scutellum, the greater part of the base of the median segment and the apex of the posterior median area largely, black; the antennæ rufous, the apex broadly black; the wings hyaline, with a slight fulvous tinge; the stigma dark testaceous; the nervures blackish. ♀ and ♂. Length 13 mm.

Hab. Khasia Hills (coll. Rothney).

Face closely, the clypeus more sparsely punctured; the vertex and front are more closely punctured; the eye orbits are pallid yellow, the inner above sharply margined. Mandibles black at the apex. Scutellum more sparsely and strongly punctured than the mesonotum. Except in the centre at the base and on the sides of the areola, the median segment is closely and distinctly and rather strongly punctured. Petiole smooth; the second and third segments closely punctured; the gastrocœli obsolete; the base of the segment closely punctured like its centre. The fourth abdominal segment may be black, wholly or in part.

CALLAJOPPA, gen. nov.

Scutellum pyramidal, with a long oblique apical slope. Basal depression of the median segment wide and deep; the areola small, smooth, and shining, rounded behind and not margined there; the apex transverse; there are five apical areæ, all clearly defined, this being also the case with the spiracular. Labrum projecting. Apex of clypeus transverse, its foveæ deep. Antennæ stout; the third joint not much longer than the fourth. Areolet 4-angled, the nervures touching on the top; the disco-cubital nervure with a large stump of a nervure; the transverse median nervure not interstitial, being received shortly beyond the transverse basal. Abdomen not much longer than the head and thorax united; with eight segments, the last small and with large cerci; the apex of the abdomen broad and bluntly rounded; the segments minutely punctured, almost smooth and distinctly shining.

Comes close to *Dimatha*, which has a similarly formed median segment and smooth, not margined, small areola; but it may be known from the present genus by the scutellum not being pyramidal, by the abdomen being longer and narrower, by the wings being clouded at the apex, by the disco-cubital and recurrent nervures not being broken by the stump of a nervure. *Erythrojoppa* is also nearly related; its occiput is sharply keeled; the

abdomen longer and narrower, with the segments punctured and striated, the temples more sharply obliquely narrowed, straight, not rounded, as in the present species.

CALLAJOPPA BILINEATA, sp. nov.

Rufo-testaceous; the mesonotum, except for two lines in the middle, the pleuræ, the metanotum, except at the base, the fourth and following segments of the abdomen and the greater part of the hinder coxæ; the centre of the front and vertex and the greater part of the occiput, which are black; the antennæ of a more yellowish paler colour, with the apex black; the wings hyaline, with a distinct yellowish tinge; the stigma testaceous; the nervures darker. ♀. Length 24 mm.

Hab. Japan.

Face and base of clypeus punctured; the vertex more sparsely punctured; the depressed front smooth and shining; the ocellar region projects into its centre as a sharp-point wedge. Mesonotum closely and uniformly, but not strongly, punctured; its sides depressed and rufous; the scutellum almost impunctate. Median segment coarsely, closely, transversely striated, except at the base, which is finely rugose; the pleuræ are coarsely obliquely striated. Pro- and mesopleuræ more strongly and closely punctured than the mesonotum; the depression and apex of the propleuræ striated. The petiole is depressed in the centre, the sides being distinctly raised, forming stout keels; the centre of the post-petiole is depressed, the depressed part being finely longitudinally striated. Gastroceli deep, smooth, with a few striæ above on the inner side; the space between them is not striated.

AMBLYPYGI.

PLATYLABUS FERRUGINEUS, sp. nov.

Ferruginous; the eye orbits, the base of the propleuræ, and the tubercles pale yellow; wings hyaline; the nervures and stigma black; the flagellum of the antennæ blackish from behind the middle. ♀. Length 5 mm.

Hab. Trincomali, Ceylon (Yerbury).

Head closely punctured; the face more strongly than the front or vertex; the apex of the clypeus and the labrum smooth. Thorax closely punctured; the scutellum more shining and only sparsely and indistinctly punctured. Areola longer than broad, open behind, its apex transverse; aciculated; the posterior median area almost smooth, its base obscurely striated; the other areæ are more closely and strongly punctured; the sides in the middle bear a short spine. Petiole aciculated; the other segments are more distinctly punctured. Gastroceli shallow. Areolet 4-angled; the nervures uniting above; the lower side angularly projecting below the cubitus.

HALIPHERA, gen. nov.

Scutellum roundly convex. Median segment longish, its apex with a rather steep slope, its sides toothed; the areola large, fully twice longer than broad, open at the base and apex. Abdomen longer

than the head and thorax united; with eight dorsal segments; on the back they are rather flat; gastrocœli small, the space between not striated. Ventral fold on the third and fourth segments. Tarsi covered thickly with pubescence and more sparsely spined. The antennæ are stout, compressed beyond the middle and broadly ringed with white. Apex of clypeus transverse; it is not separated from the face. Labrum hidden. Hypopygium large, cultriform, but not covering the terebra. Apical two segments spotted with yellow.

May be known from *Amblyteles*, to which it is most closely related, by the longer median segment, with its longer areola, and by the distinctly roundly convex scutellum.

HALIPHERA MACULIPES, sp. nov.

Black; the sides of the clypeus, the face, except in the centre, the inner orbits—broader above than below—the lower half of the outer, the palpi, a broad band, obliquely curved below, on the edge of the pronotum, the lower part of the propleuræ behind, a mark on the middle of the mesonotum, the scutellums, the middle of the median segment—the mark narrowed above, rounded below—the tubercles, a large mark on the middle of the mesopleuræ—narrowed gradually and rounded behind—a large oval mark on the metapleuræ, the post-petiole, a mark on the sides of the second and third segments, a small mark on the top of the penultimate, and the whole of the last segment, bright lemon-yellow. Legs yellow; the four front femora above, the base of the lower part of the hind coxæ, the trochanters, the basal and apical third of the hinder femora, and the apex of the tibiæ, black. Wings hyaline; the stigma brown; the nervures darker. Scape of antennæ yellow in the middle below; the middle of the flagellum with a broad white band. ♀. Length 13 mm.

Hab. Darjeeling.

Face closely, the clypeus much more sparsely, punctured, and thickly covered with short white pubescence. The upper part of the front in the centre transversely, irregularly striated; the lower part of the ocellar region obliquely, the vertex behind the ocelli closely striated. Mesonotum closely rugosely punctured, the scutellum smooth. Median segment closely rugosely punctured at the base; the sides from near the apex of the spiracles transversely reticulated; the sides of the apical slope widely and irregularly reticulated; the spiracular area below the spiracles stoutly obliquely striated; the teeth stout, bluntly rounded. Pleuræ closely punctured. Abdominal petiole to near the apex aciculated and sparsely punctured; the post-petiole almost smooth in the centre, the sides distinctly, but not closely punctured; the basal half of the second segment finely and closely striated. Gastrocœli deep, smooth.

HARSACES, gen. nov.

Scutellum flat, its sides at the base keeled to the middle. Areola twice longer than broad, its basal half narrowed, the keels there curving roundly inwardly and not quite reaching to the base. Post-petiole longer than the narrowed basal part, three times its width, the central part clearly separated. Metathoracic spiracles three times

longer than wide. Gastroceci deep. The ventral fold projects outwardly on the second to fourth segments, forming a broad margin along the lower edge. Areolet 5-angled; the nervures wide apart above. Fore tarsi with some spines. The abdomen is bluntly pointed at the apex; its back is roundly convex; the temples broad, the mandibles broad, bidentate—the middle area of the post-petiole is clearly separated and for the most part smooth.

Comes near to *Platylabis*, from which it may be known by the flat scutellum, much larger and longer, compared with its width, areola, and by the large, broader, and more distinctly separated petiole.

HARSACES NIGRIPES, sp. nov.

Black; densely covered with white pubescence; the second and third abdominal segments red; the inner eye orbits, sides of clypeus, and two marks on the apex of the scutellum pale yellow; the fore tibiæ slightly testaceous; the wings hyaline; the nervures and stigma black. ♀. Length 7 mm.

Hab. Himalaya.

Antennæ black, covered with a microscopic pile. Face and clypeus closely, strongly, and uniformly punctured; the front and vertex are, if anything, more closely punctured. Apical half of mandibles rufopiceous. Maxillary palpi pale yellow. Thorax closely, uniformly, and distinctly punctured; the punctures on the scutellum are more widely separated. Areola smooth; its edges depressed. Calcaria white. The middle and apex of the central area of the post-petiole are smooth; the rest of the segment and all the others closely punctured.

OXYPYGI.

TAPHANES, gen. nov.

Areola not separated behind, large, roundly contracted in the middle, separated from the lateral areæ. Abdomen with eight segments; the post-petiole clearly separated; gastrocæli deep; the last segments sharply pointed; sheaths of the ovipositor largely projecting; the ventral keel distinct on the second and third segments only. Antennæ stout, dilated beyond the middle. Labrum visible. Scutellum flat. Areolet 5-angled, narrowed above; the disco-cubital nervure with the stump of a nerve. Legs short and stout; the tarsi spinose.

Belongs to the Oxypygi. May be known by the largely projecting sheaths of the ovipositor, and by the large areola open behind, and roundly narrowed in the middle. The temples are of moderate size; the occiput is roundly incised; the post-scutellum bifoveate at the base; the apex of the median segment has a gradually rounded slope. In Ashmead's arrangement this genus would come near *Exephanes*.

TAPHANES RUFIVENTRIS, sp. nov.

Black; the outer and inner orbits, the face, clypeus, labrum, a triangular mark on the base of the mandibles, palpi, a line on the apical two-thirds of the pronotum, two lines in the middle of the mesonotum,

the scutellum, except for a black line, widest on the basal half, in the centre, the post-scutellum, an oblique mark, widest on the lower half, on the sides of the metanotum at the apex, the tubercles, the lower half of the mesonotum, and a large mark on the metapleuræ, below and touching the keel, yellow. Antennæ black, the middle whitish, the apex fuscous, the scape yellow below. The four front legs are pallid yellow, the femora and tibiæ broadly marked with black behind, the femora tinged with rufous above, the hinder coxæ black, broadly yellow at the apex above and more narrowly at the apex below, the trochanters yellow, the basal half of the hinder femora, the apical half, as are also the tarsi, black. Wings hyaline, the stigma fuscous. Abdomen rufous, the petiole and the apical two segments black, the apex of the petiole yellow. ♀. Length, 11 mm.

Hab. Darjeeling.

Face and clypeus, except the latter at the sides, punctured; there is a deep furrow outside the hinder ocelli; the occiput is sharply margined. Mesonotum punctured, but not very closely or deeply; the scutellum sparsely punctured. Base of median segment aciculated, the keels indistinct; the apical three areæ are distinctly defined and closely and coarsely punctured, as is also the spiracular. The centre of the post-petiole is longitudinally punctured; the gastrocœli deep, smooth, except for some striæ at the base; the space between is longitudinally striated to near the end of the segment. Pleuræ closely punctured; the apex of the pro- obliquely and somewhat irregularly striated. Post-petiole strongly punctured throughout, as are also the other abdominal segments. Tarsi longer than usual. The ventral keel extends on to the fifth segment; the last abdominal segment is bluntly rounded; the second and third segments, and to a less extent the fourth, are closely striated; there are seven segments, the last being nearly as large as the preceding. Metanotum short; the areæ, with the exception of the areola, punctured, the basal less strongly than the others; all the areæ, including the petiolar, are distinctly defined.

LEPTOTHECUS, gen. nov.

Median segment large, distinctly longer than broad, its apex spined, and with a somewhat steep, not rounded, slope; the areola coffin-shaped, open at the base, elongate, fully three times longer than broad, transverse at the apex. Scutellum flat. Apex of clypeus broadly transverse. Labrum projecting. Antennæ broadly ringed with white, not much dilated beyond the middle. Abdominal petiole long and slender, becoming gradually, but not much, wider towards the apex; there are seven segments; the last is large, two-thirds of the length of the penultimate; the sheath of the ovipositor largely projecting, as long as the apical two segments united; the ventral fold not defined. Areolet 5-angled, narrowed above; there is a stump of a nervure on the disco-cubital. Tarsi spinose; the hinder tibiæ narrowed at the base. The thorax is longer than usual; with the head it is as long as the abdomen. The latter becomes gradually narrowed from the base of the fourth segment; the last two segments are marked with white. Hinder legs much longer than the others.

Belongs to the *Oxygyi*. May be known by the elongated

spined median segment, with its elongated coffin-shaped areola, confluent with the lateral areæ at the base; by the long projecting ovipositor; and by the smooth impunctate abdomen, with its small gastrocelli.

(To be continued.)

NOTES AND OBSERVATIONS.

PARASITES ON LARVÆ OF *MACROTHYLACIA RUBI*.—On the 17th of July I found the young larvæ of *Macrothylacia (Bombyx) rubi* very plentiful on the South Downs, resting at full length on the stems of grass. On several of those I took home I noticed what I imagined to be eggs of some parasitic fly, the kind one often finds on larvæ. Having many times successfully reared the perfect insect from larvæ from which I had removed such eggs, I started on these and destroyed them with a pair of pliers. One or two of these caterpillars had four or five attached to them, favourite spots being at the side of the head and on the base of the claspers. Just as I was dealing with the last it fell off the larva, and as I was about to squash it as it lay at the bottom of the box, I was surprised to see it commence crawling. I at once captured it and examined it through a microscope, using a low power, and found it to be, I believe, the larva of a mite. The following is a description:—Colour light reddish brown. Body oval, a shade broader posteriorly, very shiny and sparsely covered with straight black bristles, coarse and blunt. Legs six in number, and, like the body, sparsely covered with black bristles, but much finer and shorter. In front and behind each of the front legs is a rather long curved bristle, unlike the others, as it gets finer towards the end. Rostrum and palpi very prominent, attached to the body by a slender and very flexible neck. Rostrum long, pointed, and, I think, slightly curved downwards. Palpi not so long. On the 5th of this month I again went to the downs, took a dozen more larvæ, and found them all quite free from these little crawlers. I have never found larvæ attacked in this way before, and would like to know whether it is a common occurrence.—J. T. BIRD; The Lodge, Cowfold, Sussex, Aug. 17th, 1903.

SMERINTHUS POPULI DOUBLE-BROODED.—From about one hundred ova of *S. populi*, which started to hatch about May 28th, I obtained about fifty larvæ. These commenced to pupate on June 23rd, and by June 30th all had gone down. I did not disturb the pupæ, but on Aug. 12th utilised the cage containing them for some larvæ of *S. ocellatus*. I looked in the cage to-day (Aug. 14th) to see if the *S. ocellatus* larvæ required fresh food, and observed, just by the head of one of the larvæ, about a dozen pale green eggs on the willow twig. Closer examination disclosed thirteen *S. populi*, five males and eight females, the males being all dead, and most of the females busily engaged ovipositing. The larvæ from which these imagines resulted were reared under conditions in no way tending to produce this remarkable result;